



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/788,826

02/27/2004

Carsten Metz

8

6943

7590

06/21/2005

Lucent Technologies Inc.
Docket Administrator (Room 3J-219)
101 Crawfords Corner Road
Holmdel, NJ 07733-3030

EXAMINER

LEE, BENNY T

ART UNIT

PAPER NUMBER

2817

DATE MAILED: 06/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

Address : COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

SERIAL NUMBER	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
---------------	-------------	----------------------	---------------------

EXAMINER

ART UNIT	PAPER NUMBER
----------	--------------

DATE MAILED:

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

☒ This application has been examined ☐ Responsive to communication filed on _____ ☐ This action is made final.

A shortened statutory period for response to this action is set to expire Three (3) month(s), _____ days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

- | | |
|---|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited by Examiner, PTO-892. | 2. <input type="checkbox"/> Notice re Patent Drawing, PTO-948. |
| 3. <input checked="" type="checkbox"/> Notice of Art Cited by Applicant, PTO-1449. | 4. <input type="checkbox"/> Notice of Informal Patent Application, Form PTO-152 |
| 5. <input type="checkbox"/> Information on How to Effect Drawing Changes, PTO-1474. | 6. <input type="checkbox"/> _____ |

Part II SUMMARY OF ACTION

1. ☒ Claims 1-17 are pending in the application.

Of the above, claims _____ are withdrawn from consideration.

2. ☐ Claims _____ have been cancelled.

3. ☐ Claims _____ are allowed.

4. ☒ Claims 1-6; 7-10; 14-17 are rejected.

5. ☐ Claims _____ are objected to.

6. ☐ Claims _____ are subject to restriction or election requirement.

7. ☐ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.

8. ☐ Formal drawings are required in response to this Office action.

9. ☐ The corrected or substitute drawings have been received on _____. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable; ☐ not acceptable (see explanation or Notice re Patent Drawing, PTO-948).

10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on _____, has (have) been ☐ approved by the examiner; ☐ disapproved by the examiner (see explanation).

11. ☐ The proposed drawing correction, filed _____, has been ☐ approved; ☐ disapproved (see explanation).

12. ☐ Acknowledgement is made of the claim for priority under U.S.C. 119. The certified copy has ☐ been received ☐ not been received
☐ been filed in parent application, serial no. _____; filed on _____.

13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.

14. ☐ Other

SN 788826
EXAMINER'S ACTION

The disclosure is objected to because of the following informalities: Page 7, lines 9, 10, note that reference labels (H, W, D, and perhaps L) should reference --Fig. 4B-- in which they appear; line 23, note that the recitation "Similar to figure 3, the transmission line represented by plot 502..." is not understood and need clarification. Note that reference labels (402, 406, 407, 408) need description relative to "FIG. 4B". Appropriate correction is required.

The drawings are objected to because of the following: In fig. 1, note that the drawing figure needs to be designated --PRIOR ART--; In figs. 4A and/or 4B, note that reference label --L-- needs to be provided. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claims 1-6, 11-13 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described

Art Unit: 2817

in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

With respect to the “means for electrically connecting said transmission element to said at least one ground plane”, it would have been unclear how one skilled in the art would be enabled to use the invention since the apparent electrical connection of the transmission element to the ground plane would seemingly short circuit (to ground) any signals propagating along the transmission element, thereby negating and rendering inoperative the “transmission line”.

With respect to claim 12, in view of the apparent lacks of disclosure of what characterizes “at least a first characteristic of said support elements” and “at least a first characteristic of said transmission element”, one skilled in the art would not have been able to make and use applicant’s invention without resorting to undue experimentation.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 5 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by

Bastida.

Bastida discloses a transmission line structure comprising: a semi-insulating substrate (1) with ground plane (2) disposed thereon; a microstrip conductor band (5) which is suspended over the ground plane through a silicon dioxide support layer (4). As evident from fig. 5, by

Art Unit: 2817

suspending conductor band (5) over the ground plane, capacitances (6) are formed therebetween which constitute electrical connections therebetween. Moreover, as evident from Figs. 1, 2, the distance between the conducting band (5) and conducting strip portion (3) of ground plane (2) is at a different distance than that of conducting band (5) and substrate (1).

Claims 1, 2, 5 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Salmela.

Salmela discloses a transmission line structure comprising: a signal transmission element (i.e. microstrip line 20); a dielectric substrate (22, 23) having a ground plane (21) associated therewith; a support structure (25), which suspends the transmission element (20) over ground plane (21). Note that as evident by the electromagnetic field lines (24), the suspended transmission element is in electrical connection with the ground plane. Also, note that a distance between the transmission element (20) and ground plane (21) is different from a distance between the transmission element and plane (27) of the dielectric substrate (22, 23).

Claims 1, 2, 5, 6, 7-9, 14-16 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Handforth et al.

Handforth et al (fig. 2) discloses a transmission line structure (10) comprising: a dielectric substrate (5) with ground plane layer (7) disposed thereon; a strip shape conducting transmission elements (or "arms" 2) which are also in contact with ground plane (7), such as to be suspended in air channel (9) over ground plane (7). Note that the support arms (2) provide the only means of suspending the transmission element relative to the ground plane. Moreover, note that by virtue of the suspended arrangement, the transmission line element and the ground plane are inherently electrically connected to each other. Furthermore, note that the suspended

Art Unit: 2817

arrangement places the transmission line element (3) at different distances relative to ground plane (7) and dielectric substrate (5), respectively.

Claims 1, 2, 4-6; 7, 8, 10, 11; 14, 15, 17 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Bischof.

Bischof (Fig. 1) pertains to a microwave (transmission) line structure comprising: a (e.g. ceramic) substrate (2) having conductive layers (6, 7) disposed thereon as ground plane layers; a conductive (e.g. microstrip) transmission line element (3); plural (e.g. conductive) support posts (4) in contact with (or attached to) transmission line element (3) and substrate (2) only such as to suspend the transmission element (3) over ground plane (6, 7). Note that the suspended nature of the transmission element (3) inherently provides electrical connection relative to ground plane layers (6, 7) as well as providing different spacings between the transmission element (3) and the ground plane (6, 7) and the substrate (2), respectively.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Teunisse and Mooney et al pertain to conductors suspended over a ground plane.

Any inquiry concerning this communication should be directed to Benny Lee at telephone number (571) 272-1764.

Lee/ds

05/09/05


BENNY T. LEE
PRIMARY EXAMINER
ART UNIT 2817